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PPS023-P03

Room:Convention Hall

Time:May 26 16:15-18:45

Elemental analysis of planetary surface materials by laser-induced breakdown spectroscopy

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Lunar and planetary explorations start from remote sensing orbiters, then proceed to in-situ measurements by lander and rover, sample return, and human explorations. Japan had great successes in remote sensing observations by Kaguya and Hayabusa missions, however, Mars missions led by NASA and ESA are already finishing the stage of in-situ measurements, are planning future sample return mission. As for the lunar exploration, the stage of remote sensing has ended by US LRO mission. China, India, and US have announced next plans to be landing and sample return missions. This international trend continues, sooner or later, for other objects in our solar system. JAXA is also planning the first landing mission in SELENE-2, yet development of instruments on lander and rover is slow. As one of such instrument developing team, we propose LIBS as a very important instrument to measure elemental abundances of planetary surface materials.

Keywords: planetary exploration, elemental analysis, laser, spectroscopy